west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

April 12, 2016

**WELL WORK PERMIT**

**Horizontal 6A Well**

This permit, API Well Number: 47-1706765, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: 514096
Farm Name: HENDERSON, JUSTIN L.
**API Well Number: 47-1706765**
**Permit Type: Horizontal 6A Well**
Date Issued: 04/12/2016

**Promoting a healthy environment.**

API Number: 17-06765

# PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.

2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.

4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.

5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.

6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.

7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.

8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

9. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov.

4701706765

WW-6B
(04/15)

API NO. 47- 017 -
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: EQT Production Company | 306686 | Doddridge | Southwest | Oxford
Operator ID | County | District | Quadrangle

2) Operator's Well Number: 514096 Well Pad Name: OXF159

3) Farm Name/Surface Owner: Justin L. Henderson (Life Estate) Public Road Access: Co. Rt. 13

4) Elevation, current ground: 1252.2 Elevation, proposed post-construction: 1252.2

5) Well Type (a) Gas x Oil ____ Underground Storage ____
Other ____
(b)If Gas Shallow x Deep ____
Horizontal x

Michael Dolfi
2/12/16
DMF

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target formation is Marcellus at a depth of 6,665 with the anticipated thickness to be 57 feet and anticipated target pressure of 2,951 PSI. Top of Marcellus is 6,751.

8) Proposed Total Vertical Depth: 6,665

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 15,990

11) Proposed Horizontal Leg Length: 5,853

12) Approximate Fresh Water Strata Depths: 264, 325, 401

13) Method to Determine Fresh Water Depths: By offset wells

14) Approximate Saltwater Depths: 1,312; 1,379

15) Approximate Coal Seam Depths: 246, 313, 474, 616, 732, 735

16) Approximate Depth to Possible Void (coal mine, karst, other): None reported

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes ____ No x

(a) If Yes, provide Mine Info: Name: ____
Depth: ____
Seam: ____
Owner: ____

4701706765

WW-6B
(04/15)

API NO. 47- 017 -
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

18) **CASING AND TUBING PROGRAM**

| TYPE | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | FOOTAGE: For Drilling (ft) | INTERVALS: Left in Well (ft) | CEMENT: Fill-up (Cu. Ft.)/CTS |
|---|---|---|---|---|---|---|---|
| Conductor | 20 | New | A-500 | 78.6 | 40 | 40 | 60 ft^3 / CTS |
| Fresh Water | 13 3/8 | New | J-55 | 54.5 | 789 | 789 | 734 ft^3 / CTS |
| Coal | | | | | | | |
| Intermediate | 9 5/8 | New | P-110 | 40 | 5289 | 5289 | 2085 ft^3 / CTS |
| Production | 5 1/2 | New | P-110 | 20 | 15990 | 15990 | 500' above top producing zone |
| Tubing | 2 3/8 | | J-55 | 4.7 | | | May not be run, if run set 100' from TD |
| Liners | | | | | | | |

MAC
2/12/16
DFF

| TYPE | Size (in) | Wellbore Diameter (in) | Wall Thickness (in) | Burst Pressure (psi) | Anticipated Max. Internal Pressure (psi) | Cement Type | Cement Yield (cu. ft./k) |
|---|---|---|---|---|---|---|---|
| Conductor | 20 | 26 | .375 | - | 18 | Class A | 1.18 |
| Fresh Water | 13 3/8 | 17 1/2 | .38 | 2730 | 2184 | See Variance | 1.19 |
| Coal | | | | | | | |
| Intermediate | 9 5/8 | 12 3/8 | .395 | 7900 | 6320 | See Variance | 1.19 |
| Production | 5 1/2 | 8 1/2 | .361 | 12640 | 10112 | - | 1.07/1.86 |
| Tubing | 2 3/8 | NA | .19 | 7700 | | | |
| Liners | | | | | | | |

**PACKERS**

| | | | | |
|---|---|---|---|---|
| Kind: | | | | |
| Sizes: | | | | |
| Depths Set: | | | | |

4701706765

WW-6B
(10/14)

API NO. 47- 017 -
OPERATOR WELL NO. 514096
Well Pad Name: CXF159

MAG 2/12/16 DAF

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill and complete a new horizontal well in the Marcellus Formation. Drill the vertical to an approximate depth of 3399'. Kick off and drill curve. Drill the lateral in the Marcellus. Cement casing.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Hydraulic fracturing is completed in accordance with state regulations using water recycled from previously fractured wells and obtained from freshwater sources. This water is mixed with sand and a small percentage (less than 0.3%) of chemicals (including 15% Hydrochloric acid, gelling agent, gel breaker, friction reducer, biocide, and scale inhibitor), referred to in the industry as a "slickwater" completion. Maximum anticipated internal casing pressure is expected to be approximately 10000 psi, maximum anticipated treating rates are expected to average approximately 100 bpm. Stage lengths vary from 150 to 300 feet. Average approximately 200,000 barrels of water per stage. Sand sizes vary from 100 mesh to 20/40 mesh. Average approximately 200,000 pounds of sand per stage.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): No Additional

22) Area to be disturbed for well pad only, less access road (acres): No Additional

23) Describe centralizer placement for each casing string:

- Surface: Bow spring centralizers – One at the shoe and one spaced every 500'.
- Intermediate: Bow spring centralizers– One cent at the shoe and one spaced every 500'.
- Production: One solid body cent spaced every joint from production casing shoe to KOP

24) Describe all cement additives associated with each cement type:

Conductor: Class A no additives
Surface (Type 1 Cement): 0-3% Calcium Chloride Used to speed the setting of cement slurries. .25% Flake Loss Circulation Material (LCM) is used to combat the loss of the cement slurry to a thief zone.
Intermediate (Type 1 Cement): 0-3% Calcium Chloride. Salt is used in shallow, low temperature formations to speed the setting of cement slurries .0.25% flake. Loss Circulation Material (LCM) is used to combat the loss of whole drilling fluid or cement slurry (not filtrate) to a thief zone.
Production:
Lead (Type H Cement): 0.2% CD-20 (dispersant makes cement easier to mix) 15% SuperFL-300 (fluid loss/lengthens thickening time) 15% SEC-10 (fluid loss) 50 50 POZ (extender)
Tail (Type H Cement): 0.2% Super CR-1 (Retarder). Lengthens thickening time. .3% Super FL-200 (fluid loss) .2% SEC-10 (Fluid loss) 2% SuperFL-350 (fluid loss) Reduces amount of water lost to formation 60 % Calcium Carbonate. Acid solubility

25) Proposed borehole conditioning procedures:

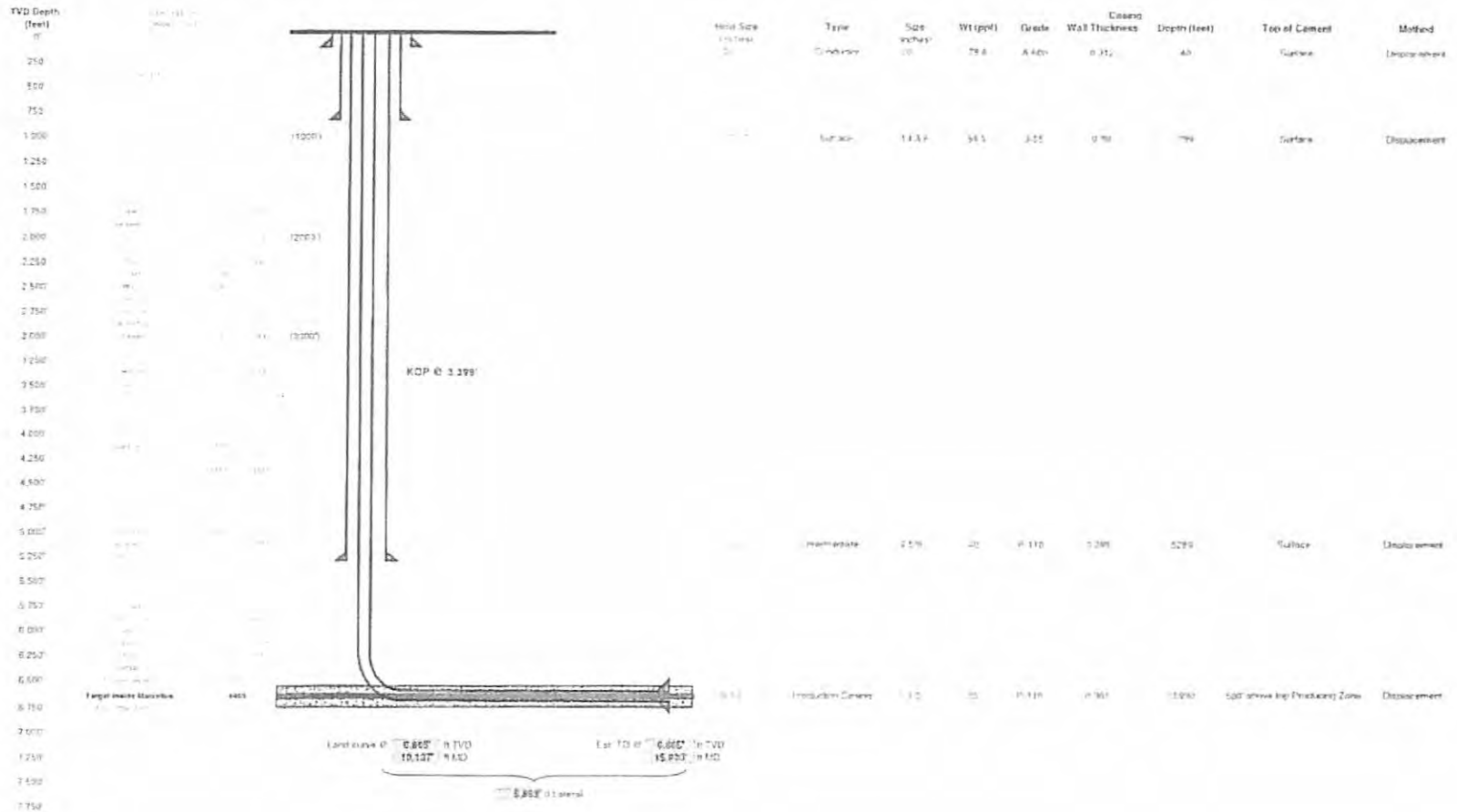
Surface: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
Intermediate: Circulate hole clean while rotating & reciprocating the drill string until cuttings diminish at surface.
Production: Pump marker sweep with nut plug to determine actual hole washout. Calculate a gauge holes bottoms up volume. Perform a cleanup cycle by pumping 3-5 bottoms up or until the shakers are clean. Check volume of cuttings coming across the shakers every 15 minutes.

*Note: Attach additional sheets as needed.

**Well** 514096(OXF159H7)
EQT Production
**Oxford**
**Doddridge** West Virgina

Pad Name

Azimuth 335.9
Vertical Section 6315




Proposed Well Work
Drill and complete a new horizontal well in the Marcellus formation
Drill the vertical to an approximate depth of 3399'
Kick off and drill curve. Drill lateral in the Marcellus. Cement casing

4701706765

MDG
2/12/16 PAF

17-0676S

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

March 18, 2014

Nabors Completion & Production Services Company
1380 Route 286 Hwy E #121
Indiana PA 15701

Re: Cement Variance Request

Dear Sir or Madam,

This agency is approving a variance request for the cement blend listed below to be used on surface and coal protection strings for the drilling of oil and gas wells in the state of West Virginia. The variance cannot be used without requesting its use on a permit application and approval by this agency:

- Type 1 (2% Calcium Chloride-Accelerator, 0.25% Super Flake-Lost Circulation, 5.2% Water, 94% Type "1" Cement)

If you have any questions regarding this matter feel free to contact me at 304-926-0499, ext. 1653.

Sincerely,

James Peterson by GCS

James Peterson
Environmental Resources Specialist / Permitting

Promoting a healthy environment.

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FEB 05 2016
WV Department of
Environmental Protection

17-06765

west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

**BEFORE THE OFFICE OF OIL AND GAS**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
**STATE OF WEST VIRGINIA**

| | | |
|---|---|---|
| **IN THE MATTER OF A VARIANCE FROM** | ) | **ORDER NO. 2014 - 17** |
| **REGULATION 35 CSR § 4-11.4/11.5/14.1** | ) | |
| **AND 35 CSR § 8-9.2.h. 4/5/6/8 OF THE** | ) | |
| **THE OPERATIONAL** | ) | |
| **REGULATIONS OF CEMENTING OIL** | ) | |
| **AND GAS WELLS** | ) | |

## REPORT OF THE OFFICE

Nabors Completion & Production Services Co. requests approval of a different cement blend for use in cementing surface and coal protection casing of oil and gas wells.

## FINDINGS OF FACT

1.) Nabors Completion & Production Services Co. proposes the following cement blend:

- 2% Calcium Chloride (Accelerator)
- 0.25 % Super Flake (Lost Circulation)
- 94% Type "1" Cement
- 5.20 % Water

2.) Laboratory testing results indicate that the blend listed in Fact No.1 will achieve a 500 psi compressive strength within 6 hours and a 2,435 psi compressive strength within 24 hours.



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17-06765

## CONCLUSIONS OF LAW

Pursuant to Articles 6 and 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter embraced in said notice, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to 35 CSR § 4-11.5 and 35 CSR § 8-9.2.h.8 the Chief of the Office of Oil and Gas may approve different cement blends upon the well operator providing satisfactory proof that different cement types are adequate.

## ORDER

It is ordered that Nabors Completion & Production Services Co. may use the cement blend listed in Findings of Fact No.1 for the cementing of surface and coal protection casing of oil and gas wells in the State as may be requested by oil and gas operators. The waiting time on the cement blend shall be **8** hours. The cement blend shall be mixed in strict accordance with the specifications for each blend and weight measurements made on-site to assure the cement slurries meet the minimum weight specifications. A sample shall be collected and, if after **8** hours the cement is not set up, additional time will be required. Nabors Completion & Production Services Co. shall keep a record of cement blend jobs in which the cement blend approved under this order is to be used and made available to the Office of Oil and Gas upon request.

Dated this, the 18th day of March, 2014.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OF THE STATE OF WEST VIRGINIA

James Martin, Chief
Office of Oil and Gas

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WV Department of
Environmental Protection

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WW-9
(2/15)

API Number 47 - 017 -
Operator's Well No. 514086

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name EQT Production Company OP Code 306686

Watershed (HUC 10) Bluestone Creek Quadrangle Oxford

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ☑ No ☐

Will a pit be used? Yes ☑ No ☐

If so, please describe anticipated pit waste: flowback water & residual solids

Will a synthetic liner be used in the pit? Yes ☑ No ☐ If so, what ml.? 60

MAG 2/12/16 OAS

Proposed Disposal Method For Treated Pit Wastes:

- ☐ Land Application
- ☐ Underground Injection ( UIC Permit Number 0014, 8462, 4037 )
- ☐ Reuse (at API Number Various )
- ☐ Off Site Disposal (Supply form WW-9 for disposal location)
- ☐ Other (Explain )

Will closed loop system be used? If so, describe: Yes, The closed loop system will remove drill cuttings from the drilling fluid. The drill cuttings are then prepared for transportation to an off-site disposal facility

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. See Attached

-If oil based, what type? Synthetic, petroleum, etc. Synthetic Mud

Additives to be used in drilling medium? See Attached

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? See Attached List

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature Victoria J. Roark

Company Official (Typed Name) Victoria J. Roark

Company Official Title Permitting Supervisor

Subscribed and sworn before me this 4 day of February, 20 16

Rebecca L Wanstreet Notary Public

My commission expires 4-7-20

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
MY COMMISSION EXPIRES APRIL 07, 2020

17-06765

WW-9

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc.

- Air is used to drill the top-hole sections of the wellbore (surface, intermediate, and pilot). Water based mud may be necessary depending on hole conditions to stabilize and drill the intermediate section. The pilot hole, curve, and lateral sections will be drilled with either air, water based mud, or oil based mud.

Additives to be used in drilling medium?

- Air - biodegradable oil lubricant, detergent, defoaming, water. Water based mud – Barite, viscosifer, alkalinity control, lime, filtration control, deflocculates, biodegradable oil lubricant, defoaming, walnut shell, salt, x-cide, carbonates. Oil based mud – synthetic base oil, emulsifier, salt, lime, viscosifer, alkalinity control, filtration control, deflocculates, biodegradable oil lubricant, defoaming, carbonates.

4701706765

Form WW-9

Operator's Well No. 514096

EQT Production Company

Proposed Revegetation Treatment: Acres Disturbed No Additional Prevegetation pH 6.6

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type Granular 10-20-20

Fertilizer amount 1/3 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

| Temporary | | Permanent | |
|---|---|---|---|
| Seed Type | lbs/acre | Seed Type | lbs/acre |
| KY-31 | 40 | Orchard Grass | 15 |
| Alsike Clover | 5 | Alsike Clover | 5 |
| Annual Rye | 15 | | |

Attach:
Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Michael Doff DAF

Comments: Preseed + mulch any disturbed areas per WVDEP regulations. Maintain & upgrade E-n-S as necessary.

Title: Oil & Gas Inspector Date: 2/12/16

Field Reviewed? (✓) Yes ( ) No

17-06765

# EQT Production Water plan
# Offsite disposals for Marcellus wells

**CWS TRUCKING INC.**
P.O. Box 391
Williamstown, WV 26187
740-516-3586
Noble County/Noble Township
Permit # 3390

**LAD LIQUID ASSETS DISPOSAL INC.**
226 Rankin Road
Washington, PA 15301
724-350-2760
724-222-6080
724-229-7034 fax
Ohio County/Wheeling
Permit # USEPA WV 0014

**TRI COUNTY WASTE WATER MANAGEMENT, INC.**
1487 Toms Run Road
Holbrook, PA 15341
724-627-7178 Plant
724-499-5647 Office
Greene County/Waynesburg
Permit # TC-1009

**Waste Management - Meadowfill Landfill**
Rt. 2, Box 68 Dawson Drive
Bridgeport, WV 26330
304-326-6027
Permit #SWF-1032-98
Approval #100785WV

**Waste Management - Northwestern Landfill**
512 E. Dry Road
Parkersburg, WV 26104
304-428-0602
Permit #SWF-1025 WV-0109400
Approval #100833WV

**BROAD STREET ENERGY LLC**
37 West Broad Street
Suite 1100
Columbus, Ohio 43215
740-516-5381
Washington County/Belpre Twp.
Permit # 8462

**TRIAD ENERGY**
P.O. Box 430
Reno, OH 45773
740-516-6021 Well
740-374-2940 Reno Office Jennifer
Nobel County/Jackson Township
Permit # 4037

**KING EXCAVATING CO.**
Advanced Waste Services
101 River Park Drive
New Castle, Pa. 16101
Facility Permit# PAR000029132

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EQT

Where energy meets innovation.™

# Site Specific Safety Plan

## EQT OXF159 Pad

## Oxford

## Doddridge County, WV

For Wells:

514096

Date Prepared: January 11, 2016

EQT Production

Permitting Supervisor
Title

2/2/16
Date

WV Oil and Gas Inspector

DAF

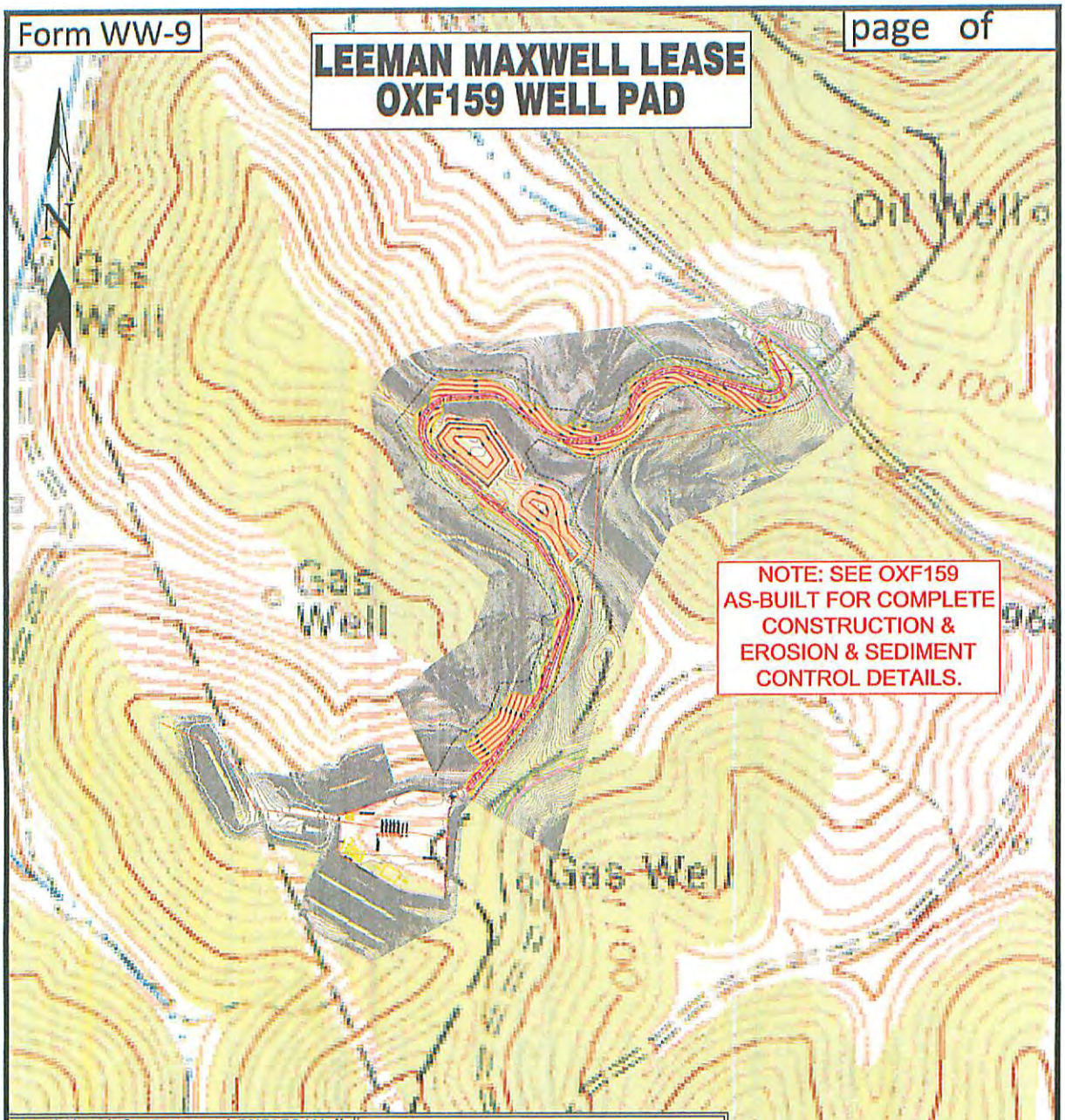
Title

2/12/16
Date

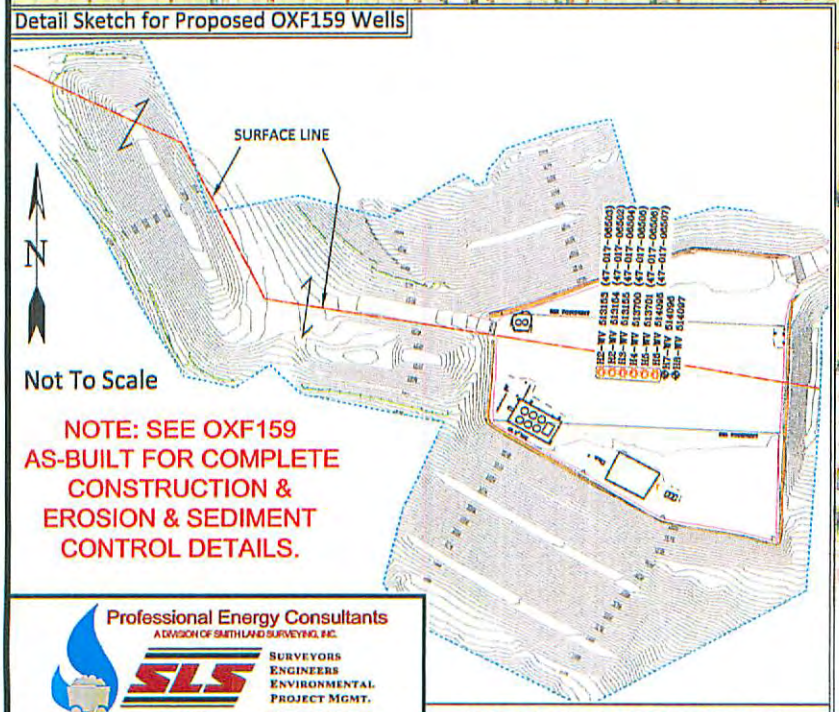
Form WW-9 page of

17-06765

# LEEMAN MAXWELL LEASE
# OXF159 WELL PAD




Detail Sketch for Proposed OXF159 Wells




Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS Surveyors Engineers Environmental Project Mgmt.
(304) 462-5634 www.slssurveys.com

| DRAWN BY | FILE NO. | DATE | CADD FILE: |
|---|---|---|---|
| K.D.W. | 7889 | 02-01-16 | 7889REC159-R.dwg |

TOPO SECTION OF OXFORD 7.5' USGS TOPO QUADRANGLE

SCALE: 1"=500'

0' 500' 1000'

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FEB 05 2016
WV Department of
Environmental Protection

# OXF159
# WV 514096
# EQT PRODUCTION COMPANY

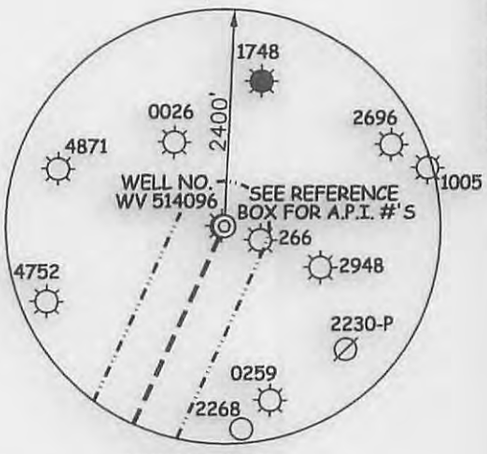
| (S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH) | | |
|---|---|---|
| NAD'27 S.P.C.(FT) | N. 260,319.53 | E. 1,642,386.59 |
| NAD'27 GEO. | LAT-(N) 39.207834 | LONG-(W) 80.762037 |
| NAD'83 UTM (M) | N. 4,339,877.05 | E. 520,560.26 |
| *LANDING POINT* | | |
| NAD'27 S.P.C.(FT) | N. 256,586.91 | E. 1,639,679.43 |
| NAD'27 GEO. | LAT-(N) 39.197482 | LONG-(W) 80.771403 |
| NAD'83 UTM (M) | N. 4,338,726.15 | E. 519,754.51 |
| *BOTTOM HOLE* | | |
| NAD'27 S.P.C.(FT) | N. 261,929.27 | E. 1,637,289.74 |
| NAD'27 GEO. | LAT-(N) 39.212055 | LONG-(W) 80.780102 |
| NAD'83 UTM (M) | N. 4,340,341.52 | E. 518,999.34 |

3,411'

LATITUDE 39°12'30"

1821'

LONGITUDE 80°45'00"




| ROYALTY OWNERS | | |
|---|---|---|
| WBM HEIRS PROPERTIES, LLC | 2400 AC.± | LEASE NO. 090490 |

| | | | |
|---|---|---|---|
| A | JUSTIN L. HENDERSON (LIFE) | 1602.90 ACRES± | TM SW-06-01 |
| B | IKE MORRIS | 6600.75 ACRES± | TM SW-10-02 |
| C | IKE MORRIS | 2331.51 ACRES± | TM SW-07-01 |
| D | CHARLES P. HEASTER ET AL | 901.72 ACRES± | TM WU-23-01 |

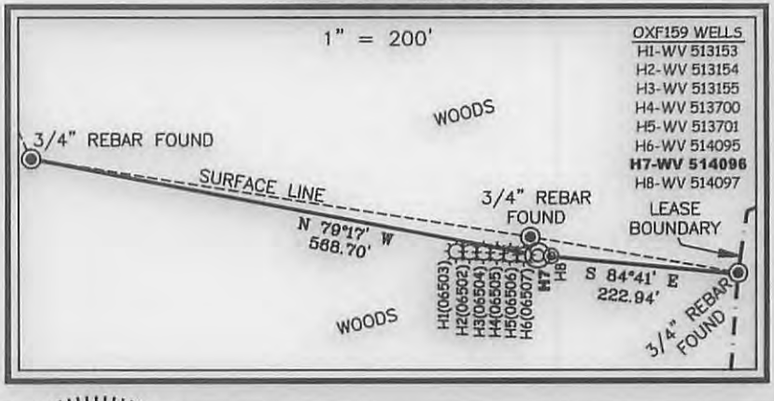
## SPECIAL NOTE

THERE IS NO SURVEY OR LEGAL DESCRIPTION DEFINING THE ACTUAL LOCATION OF THE 164 ACRE MEADOWLAND RESERVATION. DUE TO THE PASSAGE OF TIME SINCE THE RESERVATION WAS CREATED IT APPEARS THERE IS NO LIVING PERSON(S) WITH KNOWLEDGE OF ITS TRUE LOCATION. LOCATION OF RESERVATION SHOWN HEREON COMPILED FROM: "A" A MAP TITLED "CARNAGIE NATURAL GAS CO. LEEMAN MAXWELL LEASES, DODDRIDGE COUNTY, WEST VA" "B" PERIMETER OF RESERVATION AS SHOWN BY GLENN TRADER "CARETAKER OF HENDERSONS' PORTION OF MAXWELL LANDS" WHICH WAS LOCATED USING A MAPPING GRADE GPS RECEIVER "C" DETAILS SHOWN ON 1939 USDA AERIAL PHOTOGRAPHY OBTAINED FROM THE WV GEOLOGICAL SURVEY. SLS RECOMMENDS THAT PROPER LEGAL STEPS BE TAKEN TO CONFIRM CONCURRENCE OF ALL APPROPRIATE PARTIES RELATIVE TO THE RESERVATION AS SHOWN HEREON. THIS PLAT IS SUBJECT TO ANY ADDITIONAL INFORMATION (UNDISCOVERED TO DATE) WHICH MAY CHANGE THE LOCATION AND/OR CONFIGURATION OF THE RESERVATION AS SHOWN HEREON.

## NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.

## REFERENCES




Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.
(304) 462-5634
WWW.SLSSURVEYS.COM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 849 C. Victor Moyers

C. VICTOR MOYERS LICENSED No. 849 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE JANUARY 06 , 20 14

REVISED 05/08/14, 07/21/15,12/21/15 & 02/01/16

OPERATORS WELL NO. WV 514096

API WELL NO. 47 — 017 — 06765 (H6A)
STATE — COUNTY — PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 7889P514096R4.dwg

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___ IF "GAS" PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X

LOCATION :

ELEVATION PAD ELEVATION 1252' WATERSHED BLUESTONE CREEK

DISTRICT SOUTHWEST COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER JUSTIN L. HENDERSON (LIFE) ACREAGE 187.19 OF 1,602.90±

ROYALTY OWNER LEEMAN MAXWELL HRS ACREAGE 2,164±

PROPOSED WORK : LEASE NO. 706764

DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___ OTHER ___

PHYSICAL CHANGE IN WELL (SPECIFY) ___ TARGET FORMATION MARCELLUS

ESTIMATED DEPTH 6,663'

COUNTY NAME

PERMIT

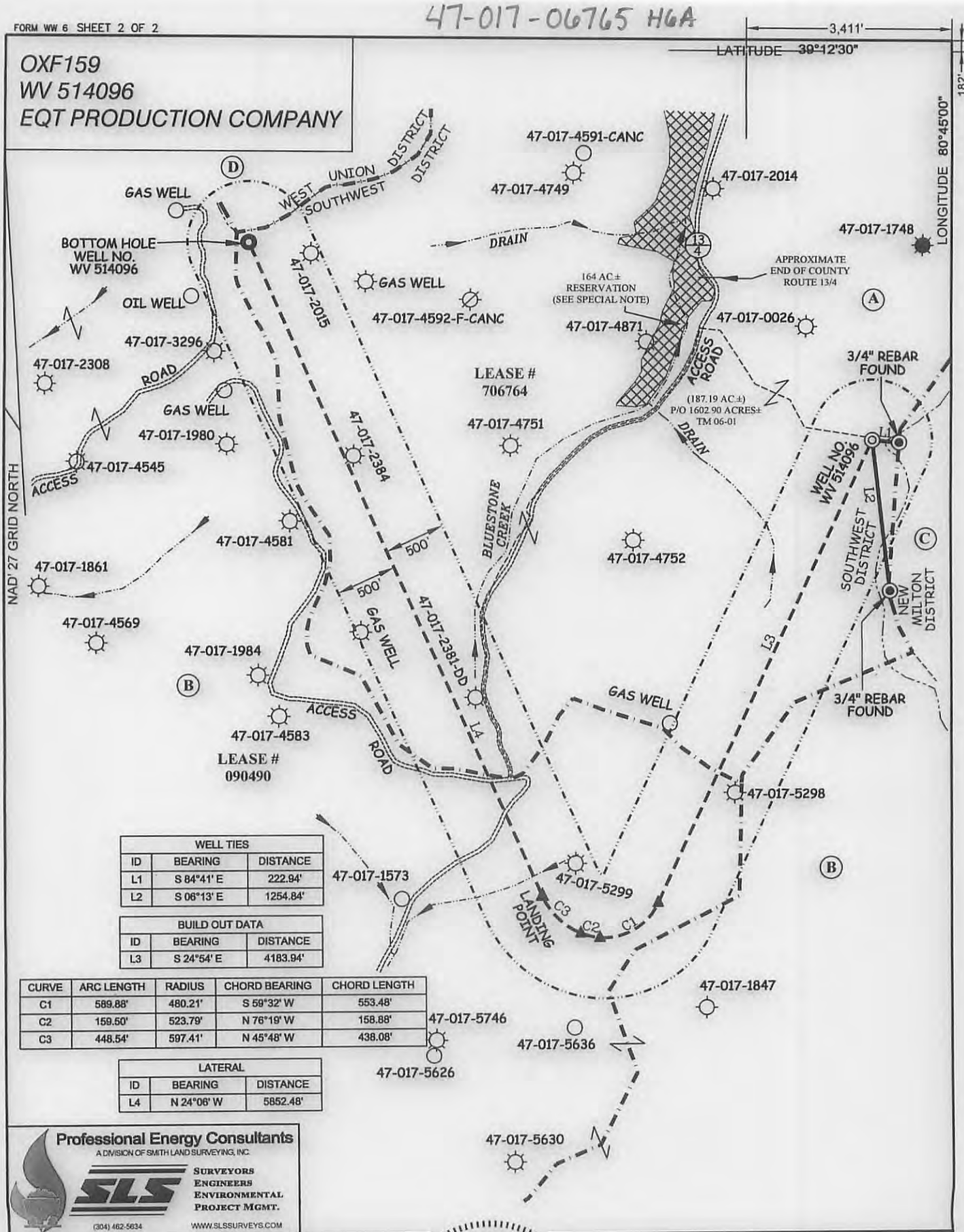
WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY

ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280

BRIDGEPORT, WV 26330 BRIDGEPORT, WV 26330

47-017-06765 H6A

# OXF159
# WV 514096
# EQT PRODUCTION COMPANY




| WELL TIES | | |
|---|---|---|
| ID | BEARING | DISTANCE |
| L1 | S 84°41' E | 222.94' |
| L2 | S 06°13' E | 1254.84' |

| BUILD OUT DATA | | |
|---|---|---|
| ID | BEARING | DISTANCE |
| L3 | S 24°54' E | 4183.94' |

| CURVE | ARC LENGTH | RADIUS | CHORD BEARING | CHORD LENGTH |
|---|---|---|---|---|
| C1 | 589.88' | 480.21' | S 59°32' W | 553.48' |
| C2 | 159.50' | 523.79' | N 76°19' W | 158.88' |
| C3 | 448.54' | 597.41' | N 45°48' W | 438.08' |

| LATERAL | | |
|---|---|---|
| ID | BEARING | DISTANCE |
| L4 | N 24°06' W | 5852.48' |

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*(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)*

| | | |
|---|---|---|
| NAD'27 S.P.C.(FT) | N. 260,319.53 | E. 1,642,386.59 |
| NAD'27 GEO. | LAT-(N) 39.207834 | LONG-(W) 80.762037 |
| NAD'83 UTM (M) | N. 4,339,877.05 | E. 520,560.26 |
| *LANDING POINT* | | |
| NAD'27 S.P.C.(FT) | N. 256,586.91 | E. 1,639,679.43 |
| NAD'27 GEO. | LAT-(N) 39.197482 | LONG-(W) 80.771403 |
| NAD'83 UTM (M) | N. 4,338,726.15 | E. 519,754.51 |
| *BOTTOM HOLE* | | |
| NAD'27 S.P.C.(FT) | N. 261,929.27 | E. 1,637,289.74 |
| NAD'27 GEO. | LAT-(N) 39.212055 | LONG-(W) 80.780102 |
| NAD'83 UTM (M) | N. 4,340,341.52 | E. 518,999.34 |

VICTOR MOYERS C. LICENSED No. 849 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR
2/01/16

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

*LEGEND*

LEASE LINE
SURFACE LINE
WELL LATERAL
OFFSET LINE
TIE LINE
CREEK
ROAD
FENCE LINE
COUNTY ROUTE
PROPOSED WELL
EXISTING WELL
PERMITTED WELL
SOUTHWEST DISTRICT TAX MAP–PARCEL SW–00–00
WEST UNION DISTRICT TAX MAP–PARCEL WU–00–00

COUNTY NAME

PERMIT

SCALE 1" = 1000'

DATE JANUARY 06 , 20 14

REVISED 05/08/14, 07/21/15, 12/21/15 & 02/01/16

*OPERATORS WELL NO.* WV 514096

API WELL NO. 47 — 017 — 06765 H6A
STATE — COUNTY — PERMIT

STATE OF WEST VIRGINIA
DIVISION OF
ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

**WELL OPERATOR** EQT PRODUCTION COMPANY
**ADDRESS** 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

**DESIGNATED AGENT** REX C. RAY
**ADDRESS** 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

OXFORD QUAD

17-06765

WW-6A1
(5/13)

Operator's Well No. 514096

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE**
**Chapter 22, Article 6A, Section 5(a)(5)**
**IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

| Lease Name or Number | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|---|---|---|---|---|
| See Attached | | | | |

**Acknowledgement of Possible Permitting/Approval**
**In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: EQT Production Company
By: Victoria J. Roark
Its: Permitting Supervisor

17-06765

WW-6A1 attachment | Operator's Well No. 514096

| Lease No. | Grantor, Lessor, etc. | Grantee, Lessee, etc. | Royalty | Book/Page |
|---|---|---|---|---|
| 706764 | **L.B. Maxwell Heirs (current royalty owner)** | | 1/8 Min Pd | |
| | Leeman Maxwell, et ux (original lessor) | John A. Connolly | | LB 14/327 |
| | John A. Connolly AKA Connolly Oil Company | Eastern Oil Company | | LB 18/499 |
| | Eastern Oil Company & Connolly Oil Company | Carnegie Natural Gas Company | | LB 92/240 |
| | Carnegie Natural Gas Company | Carnegie Production Company | | LB 186/61 |
| | Carnegie Production Company (USX) | Equitable Production Company | | Purchase & Sale Agreement |
| | Equitable Production Company | EQT Production Company - Merger Name Change | | DB 281/346 |
| 090490 | **WBM Heirs Properties LLC (current royalty owner)** | | 1/8 Min Pd | |
| | William Brent Maxwell, et al (original lessor) | Carter Oil Co. | | LB14/376 |
| | Carter Oil Co. | Hope Natural Gas Co. | | LB42/410 |
| | Hope Natural Gas Co. | Consolidated Gas Supply Corp. | | DB143/345 |
| | Consolidated Gas Supply Corp. | Consolidated Gas Transmission Corp. | | LB135/583 |
| | Consolidated Gas Transmission Corp. | UMC Petroleum Corp. | | DB167/416 |
| | UMC Petroleum Corp. | Ashland Exploration, Inc. | | DB227/252 |
| | Ashland Exploration, Inc. | Blazer Energy Corp. | | LB181/412 |
| | Blazer Energy Corp. | Eastern States Oil & Gas Inc. | | LB182/96 |
| | Eastern States Oil & Gas Inc. | Equitable Production Company | | CB281/346 |
| | Equitable Production Company | EQT Production Company | | CB281/346 |

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17-06765

EQT

February 2, 2015

Mr. James Martin
West Virginia Department of Environmental Protection
Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304

Re: OXF159, well 514096
Southwest District, Doddridge County

Dear Mr. Martin,

EQT Production Company is submitting an application for a new well work permit for the above well number. Upon information and belief, Operator's lease and/ or other real property rights permit it to conduct drilling operations for the subject well in the location shown on the plat, including under any public roads that the well lateral crosses.

Sincerely,

Vicki Roark
Permitting Supervisor-WV

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PURCHASE AND SALE AGREEMENT

BETWEEN

USX CORPORATION
AS
SELLER

AND

EQUITABLE RESOURCES, INC.
AS
BUYER

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17-06765

# PURCHASE AND SALE AGREEMENT

PURCHASE AND SALE AGREEMENT, dated as of May 27, 1999 (this "Agreement"), by and between USX CORPORATION, a Delaware corporation, ("USX") and EQUITABLE RESOURCES, INC., a Pennsylvania corporation (hereinafter referred to as "Buyer").

WHEREAS, USX owns directly or indirectly all of the outstanding capital stock or other evidence of an equity interest of the following companies (each a "Carnegie Company" and collectively the "Carnegie Companies"), which are involved in one or more of the production, gathering, transportation, treatment, distribution and sale of natural gas: (i) Carnegie Natural Gas Company, a Pennsylvania corporation, ("Carnegie"), (ii) Carnegie Interstate Pipeline Company, a Delaware corporation, ("CIPCO"), (iii) Carnegie Production Company, a Pennsylvania corporation, ("CPC"), (iv) Carnegie Natural Gas Sales, Inc., a Delaware corporation, ("CNGS") and (v) Carnegie Gas Storage, LLC, a Delaware limited liability company, ("CGS"); and

WHEREAS, USX desires to sell to Buyer and Buyer desires either for itself and/or one or more designated subsidiaries to purchase from USX one hundred percent (100%) of the capital stock and other evidence of equity interest in the Carnegie Companies;

NOW, THEREFORE, for and in consideration of the premises and the representations, warranties, covenants and agreements herein set forth and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, agree as follows:

## ARTICLE I
## DEFINITIONS

Unless otherwise specifically stated in the text of this Agreement, the following terms shall have the following meanings:

Section 1.1 The "1935 Act" shall mean the Public Utility Holding Company Act of 1935, as amended.

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5.13 No Third-Party Rights. Nothing in this Agreement, expressed or implied, shall or is intended to confer upon any Person other than the parties hereto or their respective successors or assigns.

IN WITNESS WHEREOF, the parties have executed, delivered and entered into this agreement as of the day and year first above written.

USX Corporation

By: V G Beghini

Typed Name: V. G. Beghini
Title: Vice Chairman - Marathon Group

Equitable Resources, Inc.

By: David L. Porges

Typed Name: David L. Porges
Title: Senior Vice President and Chief Financial Officer



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WW-6AC
(1/12)

# STATE OF WEST VIRGINIA
# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
## NOTICE CERTIFICATION

**Date of Notice Certification:** _____

**API No.** 47- 017 - 06765
**Operator's Well No.** 514096
**Well Pad Name:** OXF159

**Notice has been given:**
Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

| | | | | |
|---|---|---|---|---|
| State: | WV | UTM NAD 83 | Easting: | 520560.26 |
| County: | Doddridge | | Northing: | 4339877.05 |
| District: | Southwest | Public Road Access: | | Co. Rt. 13 |
| Quadrangle: | Oxford | Generally used farm name: | | Justin L. Henderson (Life Estate) |
| Watershed: | Bluestone Creek | | | |

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:

*PLEASE CHECK ALL THAT APPLY

| | | OOG OFFICE USE ONLY |
|---|---|---|
| ☐ 1. NOTICE OF SEISMIC ACTIVITY | or ☒ NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED | ☐ RECEIVED/ NOT REQUIRED |
| ☐ 2. NOTICE OF ENTRY FOR PLAT SURVEY | or ☒ NO PLAT SURVEY WAS CONDUCTED | ☐ RECEIVED |
| ☒ 3. NOTICE OF INTENT TO DRILL | or ☐ NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or ☐ WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH) | ☐ RECEIVED/ NOT REQUIRED |
| ☒ 4. NOTICE OF PLANNED OPERATION | | ☐ RECEIVED |
| ☒ 5. PUBLIC NOTICE | | ☐ RECEIVED |
| ☒ 6. NOTICE OF APPLICATION | | ☐ RECEIVED |

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**Required Attachments:**
The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

17-06765

WW-6AC
(1/12)

**Certification of Notice is hereby given:**

THEREFORE, I _____, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | | | |
|---|---|---|---|
| Well Operator: | EQT Production Company | Address: | 115 Professional Place P.O. Box 280 |
| By: | Victoria J. Roark | | Bridgeport WV 26330 |
| Its: | Permitting Supervisor | Facsimile: | 304-848-0041 |
| Telephone: | 304-848-0076 | Email: | Vroark@eqt.com |

NOTARY SEAL
OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
My commission expires April 07, 2020

Subscribed and sworn before me this 4 day of February 2016

Rebecca L Wanstreet Notary Public

My Commission Expires 4-7-20

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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Environmental Protection

WW-6A
(9-13)

API NO. 47- 017 - 06765
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

# STATE OF WEST VIRGINIA
# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
## NOTICE OF APPLICATION

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**

**Date of Notice:** 2/4/16 **Date Permit Application Filed:** 2/4/16

**Notice of:**

☑ PERMIT FOR ANY WELL WORK ☐ CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

**Delivery method pursuant to West Virginia Code § 22-6A-10(b)**

☐ PERSONAL SERVICE ☐ REGISTERED MAIL ☑ METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

☑ Application Notice ☑ WSSP Notice ☑ E&S Plan Notice ☑ Well Plat Notice is hereby provided to:

☑ SURFACE OWNER(s)
Name: See Attached
Address: _____

Name: _____
Address: _____

☑ SURFACE OWNER(s) (Road and/or Other Disturbance)
Name: See Attached
Address: _____

Name: _____
Address: _____

☑ SURFACE OWNER(s) (Impoundments or Pits)
Name: See Attached
Address: _____

☑ COAL OWNER OR LESSEE
Name: See Attached
Address: _____

☐ COAL OPERATOR
Name: _____
Address: _____

☑ SURFACE OWNER OF WATER WELL AND/OR WATER PURVEYOR(s)
Name: See attached
Address: _____

☐ OPERATOR OF ANY NATURAL GAS STORAGE FIELD
Name: _____
Address: _____

*Please attach additional forms if necessary

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WW-6A
(8-13)

API NO. 47- 017 - 06765
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

**Notice is hereby given:**
Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

**This Notice Shall Include:**
Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

**Well Location Restrictions**
Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

### Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

### Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

### Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court... (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of any appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

### Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-10(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

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Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

WW-6A
(8-13)

API NO. 47- 017 - 06765
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

## Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

## Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

## Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

(1) The proposed well work will constitute a hazard to the safety of persons;
(2) The plan for soil erosion and sediment control is not adequate or effective;
(3) Damage would occur to publicly owned lands or resources; or
(4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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WW-6A
(8-13)

API NO. 47- 017 - 06765
OPERATOR WELL NO. 514096
Well Pad Name: OXF159

**Notice is hereby given by:**

Well Operator: EQT Production Company
Address: 115 Professional Place P.O. Box 280
Bridgeport, WV 26330
Telephone: 304-848-0082
Email: Vroark@eqt.com
Facsimile: 304-848-0041

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
REBECCA L. WANSTREET
EQT PRODUCTION COMPANY
PO BOX 280
BRIDGEPORT, WV 26330
My commission expires April 07, 2020

Subscribed and sworn before me this 4 day of February 2016

Rebecca L Wanstreet Notary Public

My Commission Expires 4-7-20

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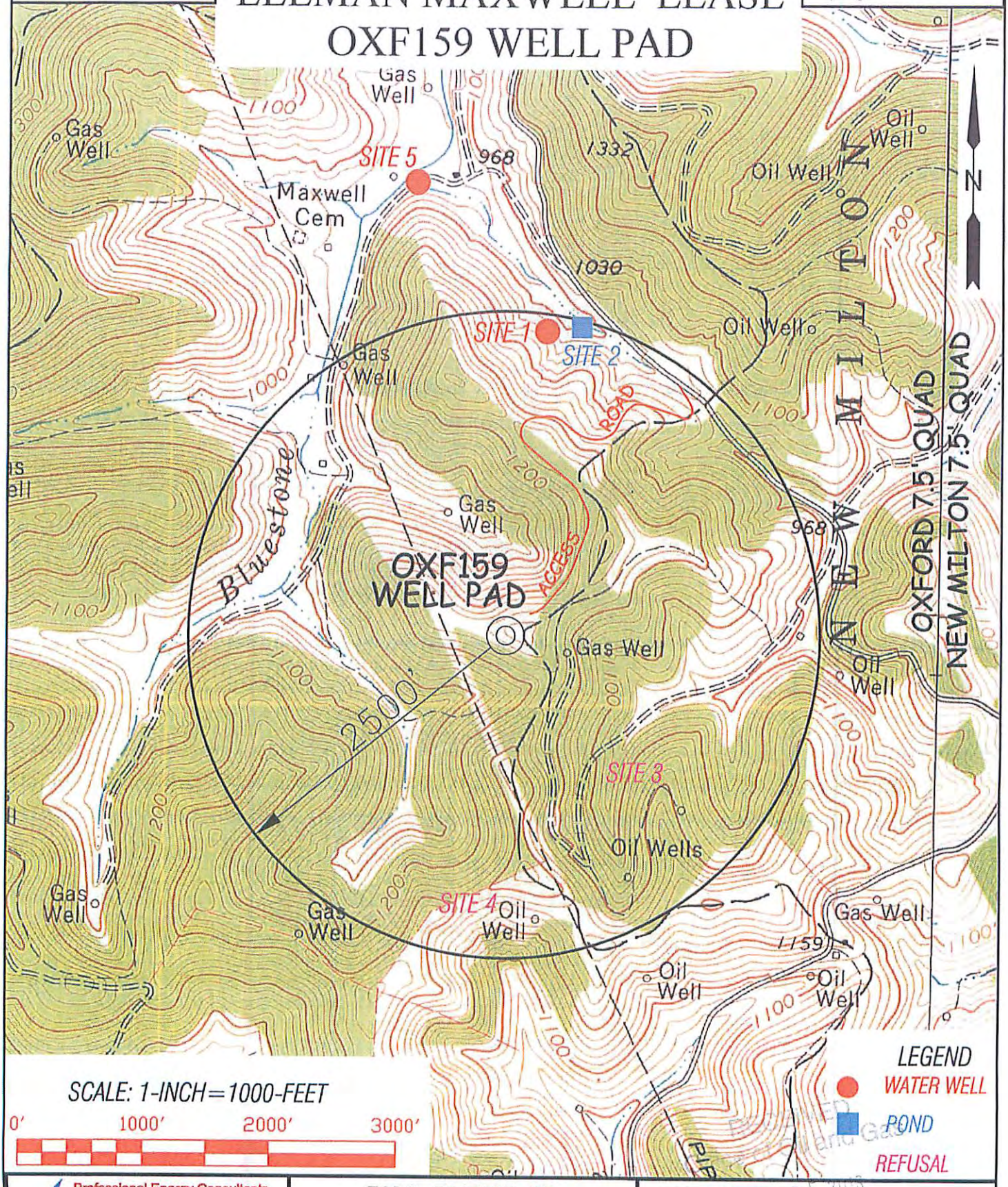
17-06765

WATER SAMPLES

# LEEMAN MAXWELL LEASE
## OXF159 WELL PAD

page of




Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.
(304) 462-5634 WWW.SLSSURVEYS.COM

| DRAWN BY | FILE NO. | DATE | CADD FILE: |
|---|---|---|---|
| K.D.W. | 7889 | 01/28/16 | 7889WSOXF159R2 |

TOPO SECTION OF:
OXFORD, WV 7.5' QUAD.

| DISTRICT | COUNTY | TAX MAP-PARCEL NO. |
|---|---|---|
| SOUTHWEST | DODDRIDGE | 06-01 |

OPERATOR:
EQT PRODUCTION COMPANY
115 PROFESSIONAL PLACE
P.O. BOX 280
BRIDGEPORT, WV 26330

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WV Dept. of Environmental Protection

WW-6A4
(1/12)

17-067665
Operator Well No. 514096

# STATE OF WEST VIRGINIA
# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
## NOTICE OF INTENT TO DRILL

Pursuant to W. Va. Code § 22-6A-16(b), the Notice of Intent to Drill is only required if the notice requirements of W. Va. Code § 22-6A-10(a) have NOT been met or if the Notice of Intent to Drill requirement has NOT been waived in writing by the surface owner.

**Notice Time Requirement:** Notice shall be provided at least **TEN (10)** days prior to filing a permit application.
**Date of Notice:** 12/11/2015 **Date Permit Application Filed:** 12/21/2015

**Delivery method pursuant to West Virginia Code § 22-6A-16(b)**

☐ HAND DELIVERY ☐ CERTIFIED MAIL RETURN RECEIPT REQUESTED

Pursuant to W. Va. Code § 22-6A-16(b), at least ten days prior to filing a permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner notice of its intent to enter upon the surface owner's land for the purpose of drilling a horizontal well: *Provided,* That notice given pursuant to subsection (a), section ten of this article satisfies the requirements of this subsection as of the date the notice was provided to the surface owner: *Provided, however,* That the notice requirements of this subsection may be waived in writing by the surface owner. The notice, if required, shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative.

**Notice is hereby provided to the SURFACE OWNER(s):**

Name: See Attached
Address:

Name: See Attached
Address:

**Notice is hereby given:**

Pursuant to West Virginia Code § 22-6A-16(b), notice is hereby given that the undersigned well operator has an intent to enter upon the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: WV
County: Doddridge
District: Southwest
Quadrangle: Oxford
Watershed: Bluestone Creek

UTM NAD 83 Easting: 520560.26
Northing: 4339877.05
Public Road Access: Co. Rt. 13
Generally used farm name: Justin L. Henderson (Life Estate)

**This Notice Shall Include:**

Pursuant to West Virginia Code § 22-6A-16(b), this notice shall include the name, address, telephone number, and if available, facsimile number and electronic mail address of the operator and the operator's authorized representative. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

**Notice is hereby given by:**

Well Operator: EQT Production Company
Address: 115 Professional Place P.O. Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: Vroark@eqt.com
Facsimile: 304-848-0041

Authorized Representative: Victoria Roark
Address: 115 Professional Place P.O. Box 280
Bridgeport WV 26330
Telephone: 304-848-0076
Email: Vroark@eqt.com
Facsimile: 304-848-0041

**Oil and Gas Privacy Notice:**

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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WW-6A5
(1/12)

Operator Well No. 514098

# STATE OF WEST VIRGINIA
# DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
## NOTICE OF PLANNED OPERATION

**Notice Time Requirement:** notice shall be provided no later than the **filing date of permit application.**
**Date of Notice:** 2/4/16 **Date Permit Application Filed:** 2/4/16

**Delivery method pursuant to West Virginia Code § 22-6A-16(c)**

☒ CERTIFIED MAIL RETURN RECEIPT REQUESTED ☐ HAND DELIVERY

Pursuant to W. Va. Code § 22-6A-16(c), no later than the date for filing the permit application, an operator shall, by certified mail return receipt requested or hand delivery, give the surface owner whose land will be used for the drilling of a horizontal well notice of the planned operation. The notice required by this subsection shall include: (1) A copy of this code section; (2) The information required to be provided by subsection (b), section ten of this article to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. (d) The notices required by this section shall be given to the surface owner at the address listed in the records of the sheriff at the time of notice.

**Notice is hereby provided to the SURFACE OWNER(s)**
(at the address listed in the records of the sheriff at the time of notice):

Name: See Attached
Address:

Name: See Attached
Address:

**Notice is hereby given:**
Pursuant to West Virginia Code § 22-6A-16(c), notice is hereby given that the undersigned well operator has developed a planned operation on the surface owner's land for the purpose of drilling a horizontal well on the tract of land as follows:

State: WV
County: Doddridge
District: Southwest
Quadrangle: Oxford
Watershed: Bluestone Creek

UTM NAD 83 Easting: 520560.26
Northing: 4339877.05
Public Road Access: Co. Rt. 13
Generally used farm name: Justin L. Henderson (Life Estate)

**This Notice Shall Include:**
Pursuant to West Virginia Code § 22-6A-16(c), this notice shall include: (1)A copy of this code section; (2) The information required to be provided by **W. Va. Code § 22-6A-10(b)** to a surface owner whose land will be used in conjunction with the drilling of a horizontal well; and (3) A proposed surface use and compensation agreement containing an offer of compensation for damages to the surface affected by oil and gas operations to the extent the damages are compensable under article six-b of this chapter. Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Operator: EQT Production Company
Telephone: 304-848-0076
Email: Vroark@eqt.com

Address: 115 Professional Place P.O. Box 280
Bridgeport WV 26330
Facsimile: 304-848-0041

**Oil and Gas Privacy Notice:**
The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

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17-06765

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
**Division of Highways**
1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

**Reissued January 21, 2016**

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the OXF 159 Pad Site, Doddridge County

514096 OXF159H7

Dear Mr. Martin,

This well site will be accessed from Permit # 04-2014-0487 applied for by EQT Production Company for access to the State Road. The well site is located off of Doddridge County Route 13 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

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FEB 05 2016
WV Department of
Environmental Protection

Cc: Nick Bumgardner
EQT Production Company
CH, OM, D-4, File

17-06765

# Anticipated Frac Additives
## Chemical Names and CAS numbers

| Material | Ingredient | CAS Number |
|---|---|---|
| Water | | |
| Sand | Hydrotreated light petroleum distillate | 14808-60-7 |
| Friction Reducer | Tributyl tetradecyl phosphonium chloride | 64742-47-8 |
| Biocide | Ammonium chloride | 81741-28-8 |
| Scale Inhibitor | Hydrochloric Acid | 12125-02-9 |
| 15% Hydrochloric Acid | Propargyl Alcohol | 7647-01-0 |
| Corrosion Inhibitor | Methanol | 107-19-7 |
| Corrosion Inhibitor | Guar Gum | 67-56-1 |
| Gelling Agent | Sodium Persulfate | 9000-30-0 |
| Oxidizing Breaker | Potassium Carbonate | 7775-27-1 |
| Buffering Agent | | 584-08-7 |

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Protection

API#1706502
API#1706503
API#1706504
API#1706505
API#1706506
API#1706507

# OXF 159 H1-H8 SITE PLAN
# EQT PRODUCTION COMPANY

*(PROPOSED WELLS NO. WV 513153, WV 513154, WV 513155, WV 513700, WV 513701, WV 514095, WV 514096 & WV 514097)*

*SITUATE ON THE WATERS OF BLUESTONE CREEK IN NEW MILTON & SOUTHWEST DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA.*

APPROVED
WVDEP OOG
7/15/2016

## PROJECT INFORMATION

PROJECT NAME: OXF 159 H1-H8

TAX PARCELS
WEST UNION DISTRICT
MAP # 1

SURFACE OWNER
RUTH A. ARMSTRONG
WEST UNION DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA: 140.0 ± ACRES

OIL AND GAS ROYALTY OWNER
LEANNA MARIETTI, ETAL
WEST UNION DISTRICT
DODDRIDGE COUNTY, WV
TOTAL PROPERTY AREA: 214± ± ACRES

SITE LOCATION
THE OXF 159 SITE IS WEST OF HARRIS RIGHT ALONG SECTIONS ORDER OFF COUNTY ROUTE 11. THE ENTRANCE TO THE SITE IS APPROXIMATELY 0.52 MILES NORTH OF THE T.O. OF 11 AND C1 AT ACT INTERSECTION

## LOCATION COORDINATES

OXF 159 H1-H8 WELL PAD ENTRANCE
LATITUDE: 39.213056 LONGITUDE: -80.757777 (NAD 83)

OXF 159 H1-H8 WELL PAD
LATITUDE: 39.212969 LONGITUDE: -80.758194 (NAD 83)

OXF 159 ASSOCIATED PIT
LATITUDE: 39.214975 LONGITUDE: -80.761405 (NAD 83)

## SITE DISTURBANCE COMPUTATIONS

ROAD A = 11.03 ± ACRES (ROAD A & STOCKPILES A)
WELL PAD AREA = 11.94 ± ACRES (PAD & STOCKPILES B & C)
ASSOCIATED PIT AREA = 1.90 ± ACRES (PIT & MANIFOLD PAD)
TOTAL SITE DISTURBANCE = 23.87 ± ACRES

## ENTRANCE PERMIT

EQT PRODUCTION COMPANY WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MM-109) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES

## MISS UTILITY STATEMENT

MISS UTILITY OF WEST VIRGINIA WAS NOTIFIED FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN. TICKET #(20170711) AN ADDITION MISS UTILITY WILL BE CONTACTED PRIOR TO START OF THE PROJECT

## FLOODPLAIN NOTE

THE PROPOSED LIMITS OF DISTURBANCE FOR THIS PROJECT IS LOCATED IN ZONE X (UNSHADED) PER THE FLOOD INSURANCE RATE MAP (FIRM) NUMBER 54017C0150C DATED OCTOBER 2, 2013

## ENVIRONMENTAL NOTES

A WETLAND DELINEATION WAS PERFORMED ON MARCH 20, 2014 AND MARCH 28, 2014 BY TETRA TECH AND ASSOCIATES, INC. TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE APRIL 2, 2014 REPORT (PROJECT # WVH-11-0047-1000) WAS PREPARED BY TETRA TECH ASSOCIATES, INC. SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THIS REPORT DOES NOT IN ANY WAY REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH ARE AS REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFOREMENTIONED AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION DESCRIBED BY THIS REPORT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S. INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

## GENERAL DESCRIPTION

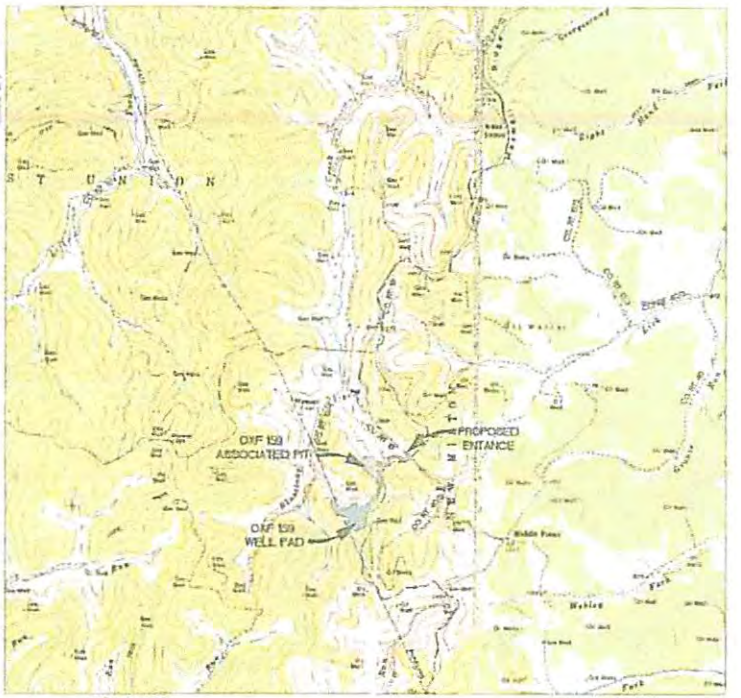
THE WELL PAD & ASSOCIATED PIT ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF HORIZONTAL MARCELLUS SHALE GAS WELLS

## RESTRICTIONS NOTES

1. THERE ARE NO PERENNIAL STREAMS, LAKES, PONDS OR RESERVOIRS WITHIN 100 FEET OF THE PAD AND LOD. THERE ARE WETLANDS WITHIN 100 FEET OF THE PAD AND LOD AND A WAIVER FROM THE WVDEP WILL BE APPLIED FOR THROUGH THE ARMY CORPS OF ENGINEERS
2. THERE IS NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE PAD AND LOD
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE PAD AND LOD
4. THERE ARE NO EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE PAD
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE PAD

## LIST OF DRAWINGS


1 COVER SHEET
2 NOTES
3 OVERALL SITE PLAN & VICINITY MAP
4 EXISTING UTILITY LAYOUT PLAN
5 WELL PAD & ACCESS ROAD DETAILS
6 ASSOCIATED PIT & ACCESS ROAD DETAILS
7 STOCKPILE DETAILS
8 WELL PAD SECTIONS
9 ASSOCIATED PIT SECTIONS
10-11 ACCESS ROAD "A" PROFILE
12-14 ROAD SECTIONS
15 STREAM CROSSING DETAILS
16 WELL PAD RECLAMATION PLAN
17 ASSOCIATED PIT RECLAMATION PLAN
18-21 CONSTRUCTION DETAILS


OXFORD QUAD NEW MILTON QUAD

LEGEND

Electronic Version of These Plans May Be Viewed at: Q:\OIL GAS\SAY FILES\REVIEWS

MISS Utility of West Virginia
1-800-245-4848
West Virginia State Law
(Section XIV Chapter 24 C)
Requires that you call two
business days before you dig in
the state of West Virginia
IT'S THE LAW!!

NAD 27 / 2/19/16 OAC

| OPERATOR | ENGINEER | SURVEYOR |
|---|---|---|
| EQT PRODUCTION COMPANY<br>OPERATOR ID: 306686<br>115 PROFESSIONAL PLACE<br>P.O. BOX 280<br>BRIDGEPORT, WV 26330<br>PHONE: (304) 848-0076 | NAVITUS ENGINEERING, INC.<br>131 HOWDY HILL LANE<br>WINCHESTER, VA 22602<br>PHONE: (540) 662-4185 | SMITH LAND SURVEYING, INC.<br>208 WEST MAIN STREET<br>P.O. BOX 150<br>GLENVILLE, WV 26351<br>PHONE: (304) 462-5634 |

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COVER SHEET
OXF 159
NEW MILTON & SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV

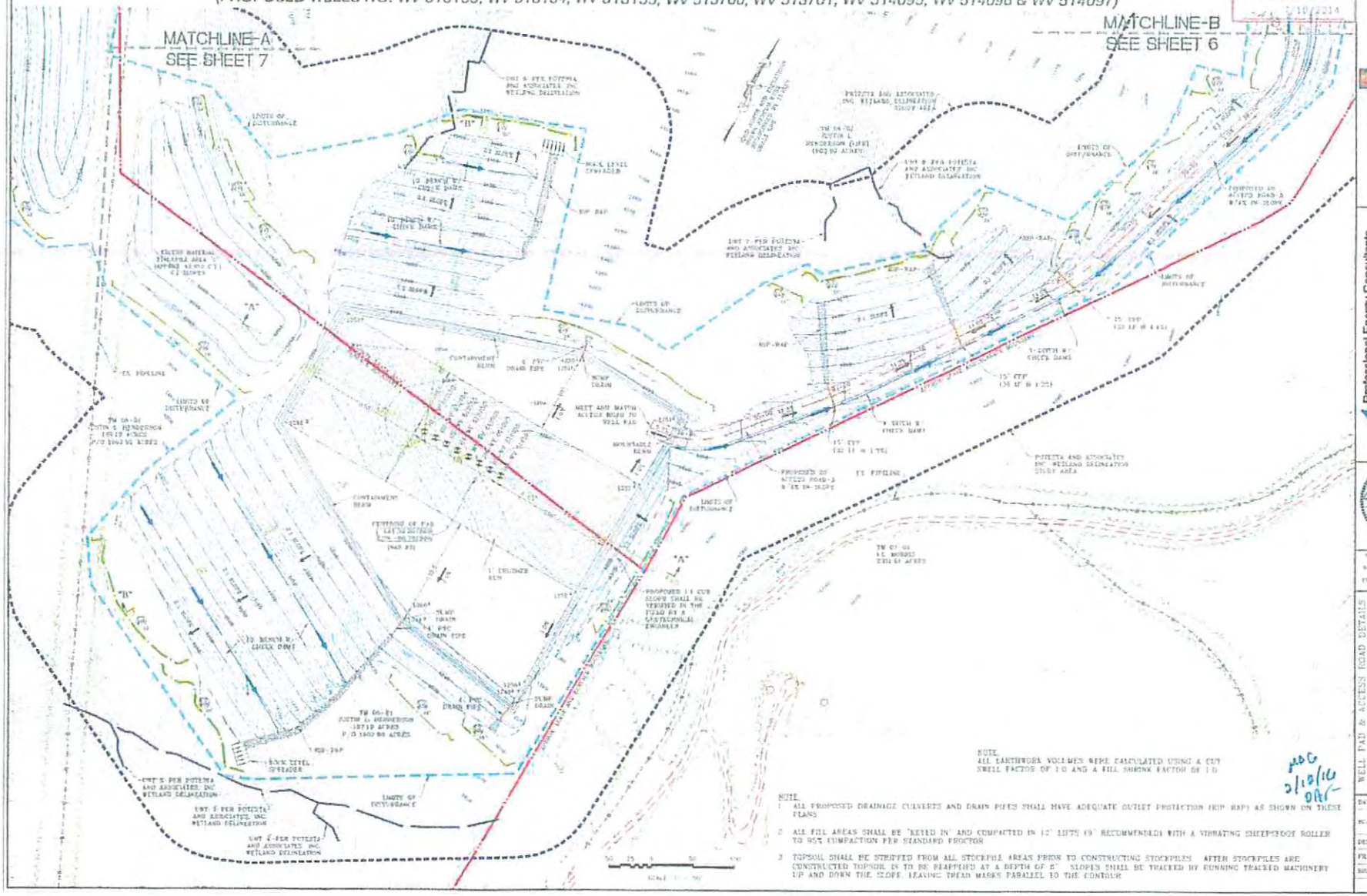
DATE: 04/08/2014
SCALE: 1" = 2000'
DESIGNED BY: CSH
FILE NO: 7004
SHEET 1 OF 21

4701706765

# WELL PAD & ACCESS ROAD DETAILS

(PROPOSED WELLS NO. WV 513153, WV 513154, WV 513155, WV 513700, WV 513701, WV 514095, WV 514096 & WV 514097)

APPROVED
WVDEP OOG
2/10/2014




MDC 2/12/14 DEP

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Professional Energy Consultants
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(304) 462-8014 www.SLSservices.com

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WELL PAD & ACCESS ROAD DETAILS
OXF 159
NEW MILTON & SOUTHWEST DISTRICT
DODDRIDGE COUNTY, WV

DATE: 04/08/2014
SCALE: 1" = 50'
DESIGNED BY: CTR
FILE NO: 7509
SHEET 5 OF 21

4707069